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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet	1	of	2
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**Complete If Known**

<b>Application Number</b>	09/631,463
<b>Filing Date</b>	August 3, 2000
<b>First Named Inventor</b>	Anthony C. Zuppers
<b>Group Art Unit</b>	Not Yet Known
<b>Examiner Name</b>	Not Yet Known
<b>Attorney Docket Number</b>	22122878-4412

## U.S. PATENT DOCUMENTS

[illegible]

**FOREIGN PATENT DOCUMENTS**

[illegible]

**Examiner  
Signature**

Kelly Stone

Date Considered

6/16/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 2

### Complete if Known

Application Number	09/631,463
Filing Date	August 3, 2000
First Named Inventor	Anthony C. Zuppero
Group Art Unit	Not Yet Known
Examiner Name	Not Yet Known
Attorney Docket Number	22122878-4412

### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
KS	1	FRESE, K. W., Jr. et al., "Hot electron reduction at etched n-Si/Pt thin film electrodes," Journal of the Electrochemical Society, Vol. 141, No. 9, September 1994, pp. 2402 - 2409.	
KS	2	MAHAN, G. D. et al., "Multilayer thermionic refrigerator and generator," Journal of Applied Physics, Vol. 83, No. 9, 1 May 1998.	
KS	3	STIPE, B. C. et al., "Atomistic studies of O2 dissociation on Pt(111) induced by photons, electrons, and by heating," J. of Chem. Phys., Vol. 107 (16), October 22, 1997, pp. 6443 - 6447.	
KS	4	TRIPA, C. E. et al., "Surface-aligned reaction of photogenerated oxygen atoms with carbon monoxide targets," Nature, Vol. 398, 15 April 1999, pp. 591 - 593.	

Examiner  
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*Henry H. H.*

Date

Considered

6/16/09

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				Application Number	09/631,463
				Filing Date	8/3/2000
				First Named Inventor	Anthony C. Zuppero et al.
				Group Art Unit	Not Yet Known
				Examiner Name	Not Assigned
Sheet	1	of	1	Attorney Docket Number	22122878-4412

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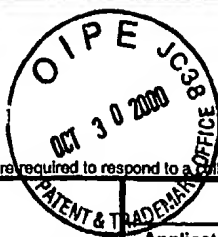
Examiner Signature	<i>Kley Steen</i>	Date Considered	6/16/09
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Substitute for form 1449B/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	09/631,463
		Filing Date	August 3, 2000
		First Named Inventor	Anthony C. Zuppiero
		Group Art Unit	
		Examiner Name	
Sheet	2	of	3
		Attorney Docket Number	22122878-4412

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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KS	1	BONN, M. et al., "Phonon-Versus Electron-Mediated Desorption and Oxidation of CO on Ru(0001)," Science, Vol. 285, No. 5430, Issue of 13 August 1999, pp. 1042-1045.	
	2	DAVIS, J. E. et al., "Kinetics and dynamics of the dissociative chemisorption of oxygen on Ir(111)," J. Chem. Phys., 107 No. 3, 15 July 1997, pp. 943-951.	
	3	GADZUK, J. W., "Hot-electron femtochemistry at surfaces: on the role of multiple electron processes in desorption," Chemical Physics, Vol. 251, year 2000, pp. 87-97.	
	4	GADZUK, J. W., "Resonance-assisted hot electron femtochemistry at surfaces," Physical Review Letters, May 27, 1996, Vol. 76, Issue 22, pp. 4234-4237.	
	5	GE, N.-H. et al., "Femtosecond Dynamics of Electron Localization at Interfaces," Science, Vol. 279, No. 5348, Issue of 9 Jan 1998, pp. 202-205.	
	6	GAO, Shiwu, "Quantum kinetic theory of vibrational heating and bond breaking by hot electrons," Physical Review B, Vol. 55, No. 3, 15 Jan 1997-I, pp. 1876-1886.	
	7	HOU, H. et al., "Enhanced Reactivity of Highly Vibrationally Excited Molecules on Metal Surfaces," Science, Vol. 284, No. 5420, Issue of 4 Jun 1999, pp. 1647-1650.	
	8	NIENHAUS, H. et al., "Direct detection of electron hole pairs generated by chemical reactions on metal surfaces," Surface Science 445 (2000) pp. 335-342.	
	9	NIENHAUS, H. et al., "Selective H atom sensors using ultrathin Ag/Si Schottky diodes," Applied Physics Letters, June 28, 1999, Vol. 74, Issue 26, pp. 4046-4048.	
	10	GAILLARD, Frederic et al., "Hot electron generation in aqueous solution at oxide-covered tantalum electrodes. Reduction of methylpyridinium and electrogenerated chemiluminescence of Ru(bpy)32+," Journal of Physical Chemistry B., Vol. 103, No. 4, January 28 1999, pp. 667-74.	
KS	11	ENGSTROM, Ulrika and RYBERG, Roger, "Comparing the vibrational properties of low-energy modes of a molecular and an atomic adsorbate: CO and O on Pt (111)," Journal Of Chemical Physics, Vol. 112, No. 4, 22 January 2000, pp. 1959-1965.	

Examiner Signature	<i>Kelly Lane</i>	Date Considered	6/16/09
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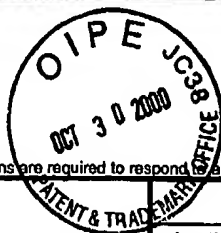
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# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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Sheet 3 of 3

## **Complete if Known**

Application Number	09/631,463
Filing Date	August 3, 2000
First Named Inventor	Anthony C. Zuppero
Group Art Unit	
Examiner Name	
Attorney Docket Number	22122878-4412

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KS	12	NOLAN, P. D. et al., "Molecularly chemisorbed intermediates to oxygen adsorption on Pt (111): A molecular beam and electron energy-loss spectroscopy study," Journal Of Chemical Physics, Vol. 111, No. 8, 22 August 1999.	
	13	NOLAN P. D. et al., " Direct verification of a high-translational-energy molecular precursor to oxygen dissociation on Pd(111)," Surface Science Vol. 419, pp. L107-L113, December 24, 1998.	
	14	OTTO, Andreas et al., "Role of atomic scale roughness in hot electron chemistry," Journal of Physical Chemistry B, Vol. 103, No. 14, April 8, 1999, pp. 2696-2701.	
	15	PLIHAL, M. et al., "Role of intra-adsorbate Coulomb correlations in energy transfer at metal surfaces," Physical Review B, Vol. 58, No. 4, July 15, 1998, pp. 2191-2206.	
	16	SUNG, Yung-Eun et al., "Enhancement of electrochemical hot electron injection into electrolyte solutions at oxide-covered tantalum electrodes by thin platinum films," Journal of Physical Chemistry B., Vol. 102, No. 49, December 3 1998, pp. 9806-11.	
	17	ZHDANOV, V. P. et al., "Substrate-mediated photoinduced chemical reactions on ultrathin metal films," Surface Science, Vol. 432 (#3), pp. L599-L603, July 20, 1999.	
	18	NIENHAUS, H., "Electron-hole pair creation by reactions at metal surfaces," American Physical Society, Centennial Meeting Program, March 20-26, 1999, Atlanta, GA, Session SC33 - Metal Surfaces: Adsorbates. <a href="http://www.aps.org/meet/CENT99/BAPS/">http://www.aps.org/meet/CENT99/BAPS/</a>	
KS	19	NIENHAUS, H et al., "Electron-Hole Pair Creation at Ag and Cu Surfaces by Adsorption of Atomic Hydrogen and Deuterium," Physical Review Letters, Vol. 82, Issue 2, January 11, 1999, pp. 446-449.	

Examiner Signature	<i>[Signature]</i>	Date Considered	6/16/04
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**Complete if Known**

<b>Application Number</b>	09/631,463
<b>Filing Date</b>	8/3/2000
<b>First Named Inventor</b>	ANTHONY C. ZUPPERO
<b>Group Art Unit</b>	Not Yet Known
<b>Examiner Name</b>	Not Yet Known
<b>Attorney Docket Number</b>	22122878-4412

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Sheet	1	of	2	Attorney Docket Number	22122878-4412
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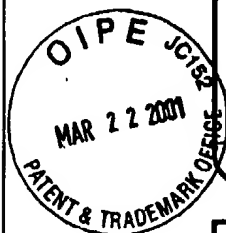
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet	2	of	2
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<b>Application Number</b>	09/631,463
<b>Filing Date</b>	8/3/2000
<b>First Named Inventor</b>	ANTHONY C. ZUPPERO
<b>Group Art Unit</b>	Not Yet Known
<b>Examiner Name</b>	Not Yet Known
<b>Attorney Docket Number</b>	22122878-4412

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**Examiner  
Signature**

Kley Hon

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet

1

of

2

Application Number

09/631.463

**Filing Date**

8/3/2000

**First Named Inventor**

**ANTHONY C. ZUPPERO**

### Group Art Unit

**Examiner Name**

Attorney Docket Number

22122878-4412

## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

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Signature**

Wiley Stone

Date  
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